CLAIMS

What is claimed is:

- A database management system for managing data in a database, comprising:
- a query optimizer for selecting an executable procedure from a plurality of procedures that operate on data in a database, wherein said query optimizer automatically generates a statistic derived from the data that is operated upon by one of the plurality of procedures, and selects the executable procedure from the plurality of procedures based on said statistic.
 - 2. The database management system of claim 1, wherein the data is organized in tables formed from columns and rows and said statistic is automatically generated for a selected column.
 - 3. The database management system of claim 1, wherein said query optimizer determines if said selected column is of a type for which a statistic can be generated and if so generates a statistic.

15

20

4. A database management system for managing data in a database, comprising:

a query optimizer for selecting an executable procedure from a plurality of procedures that operate on data in a database, wherein said query optimizer identifies that a statistic does not exist for data that is operated upon by one of the plurality of procedures; automatically generates said statistic; and selects the executable procedure from the plurality of procedures based on said statistic.

5. A database management system for managing data in a database, comprising:

a query optimizer for selecting an executable procedure from a plurality of procedures that operate on data in a database, wherein said query optimizer automatically generates a statistic derived from the data that is operated upon by one of the plurality of procedures; selects the executable procedure from the plurality of procedures based on said statistic; and automatically removes said statistic if said statistic is frequently updated.

10

15

6. A database management system for managing data in a database, comprising:

a query optimizer for selecting an executable procedure from a plurality of procedures that operate on data in a database, wherein said query optimizer automatically generates a statistic derived from the data that operated upon by one of the plurality of procedures; generates a statistic update counter for said statistic; selects the executable procedure from the plurality of procedures based on said statistic; increments said statistic update counter when said statistic is updated; statistic if said said automatically removes and statistic update counter breaches a threshold value.

- 7. The database management system of claim 6, wherein said threshold value is a constant.
 - 8. The database management system of claim 6, wherein said threshold value is a function of the data.
 - 9. The database management system of claim 5, wherein the data is organized in tables formed from columns

10

15

and rows and said statistic is generated for a selected column.

- 10. A computer having stored in memory computeroperating executable instructions for a optimizer for selecting an executable procedure from a plurality of procedures that operate on data in a database, wherein said query optimizer automatically generates a statistic derived from data that operated upon by one of a plurality of procedures; generates a statistic update counter for statistic; selects the executable procedure from the plurality of procedures based on said statistic; increments said statistic update counter when said statistic is updated; and automatically removes said statistic if said statistic update counter breaches a threshold.
 - 11. A database management system for managing data in a database, comprising:
- computer-readable instructions for generating a

 20 plurality of procedures that operate on data in a

 database;

10

15

2.0

computer-readable instructions for automatically generating a statistic derived from the data that is operated upon by one of the plurality of procedures; and

computer-readable instructions for selecting an executable procedure from the plurality of procedures based on said statistic.

12. A database management system for managing data in a database, comprising:

computer-readable instructions for generating a plurality of procedures that operate on data in a database;

computer-readable instructions for automatically generating a statistic derived from the data that is operated upon by one of the plurality of procedures;

computer-readable instructions for generating a statistic update counter for said statistic;

computer-readable instructions for selecting the executable procedure from the plurality of procedures based on said statistic;

computer-readable instructions for incrementing said statistic update counter when said statistic is updated; and

10

computer-readable instructions for automatically removing said statistic if said statistic update counter breaches a threshold.

- 13. A method for selecting an executable procedure from a plurality of procedures that operate on data in a database, comprising the steps of:
- a) automatically generating a statistic derived from data that is operated upon by one of the plurality of procedures; and
- b) selecting the executable procedure from the plurality of procedures based on said statistic.
- 14. A method for selecting an executable procedure from a plurality of procedures that operate on data in a database, comprising the steps of:
- a) determining that a statistic does not exist for data operated upon by at least one of a plurality of procedures;
 - b) generating said statistics;
- c) selecting one of said plurality of procedures using said statistic.

- 15. A computer-readable media having stored thereon computer-executable instructions for performing the steps recited in claim 14.
- 16. A method for avoiding the accumulation of statistics in a database wherein statistics are automatically generated, comprising the following steps:
 - a) creating a statistics update counter for an automatically created statistic;
 - b) incrementing said counter when said statistic is updated; and
 - c) removing said automatically created statistic when said counter breaches a threshold value.
- 17. A computer-readable media having stored thereon computer-executable instructions for performing the steps recited in claim 16.
 - 18. A method for automatically generating statistics for data in a database, comprising the following steps:
 - a) determining if automatic creation of statistics has been authorized in the database;
- b) if automatic creation of statistics has not

15

been authorized in the database, forming a guess as to the statistics;

- c) if automatic creation of statistics has been authorized in the database, determining if the data is of a type for which statistics can be generated in the database;
- 'd) if the data is of a type for which statistics can be generated in the database, generating the statistics; and
- e) if the data is of a type for which statistics can not be generated in the database, forming a guess as to the statistics.
- 19. A computer-readable media having stored thereon computer-executable instructions for performing the steps recited in claim 18.